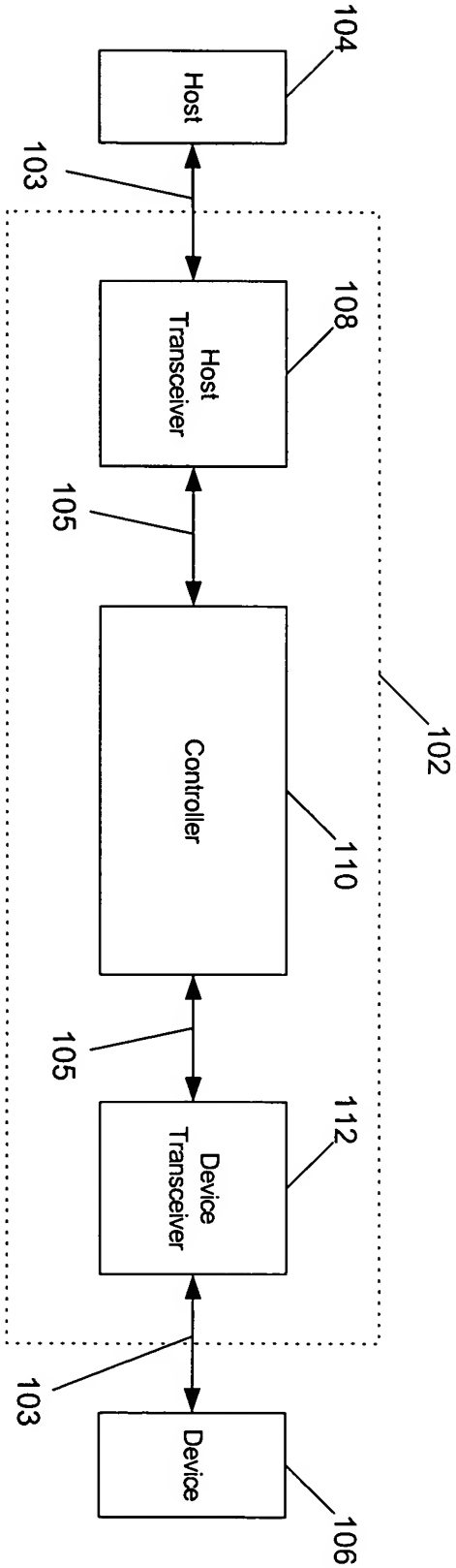

Figure 1

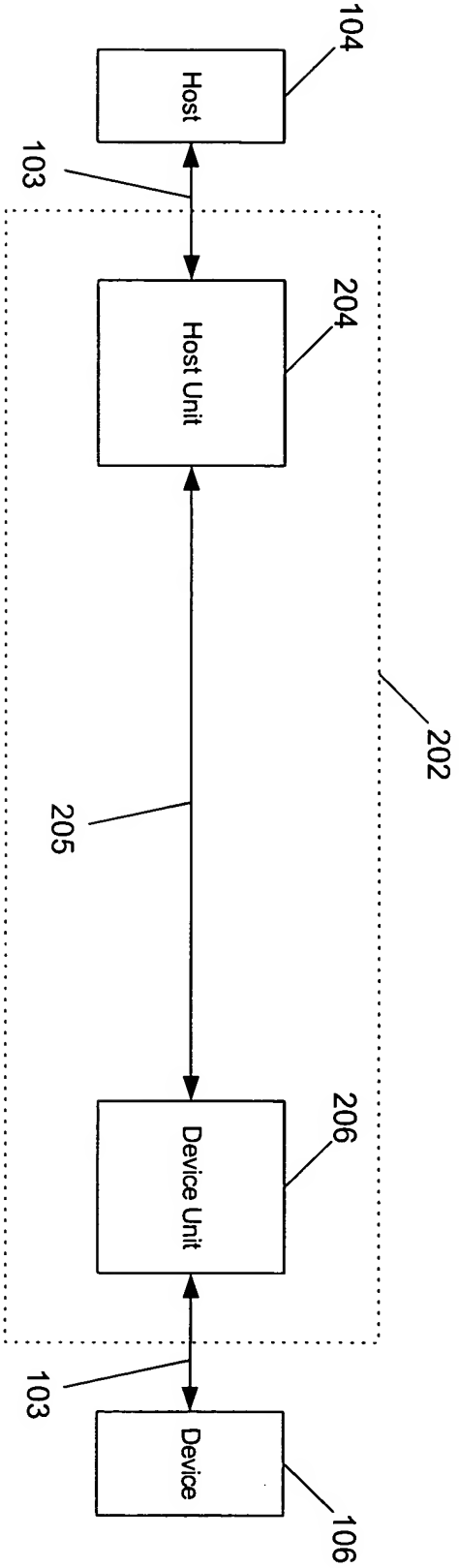

Figure 2A

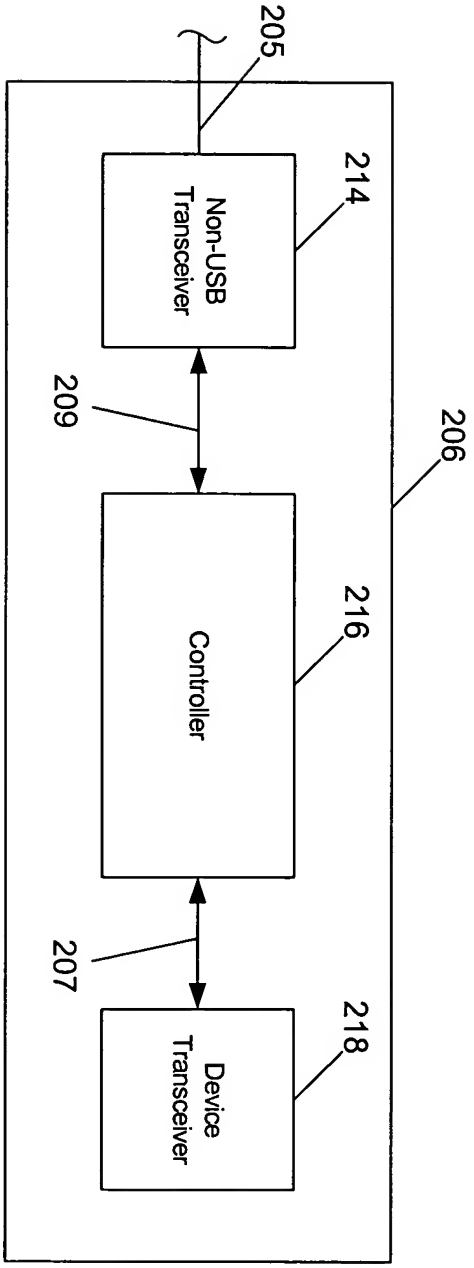

Figure 2C

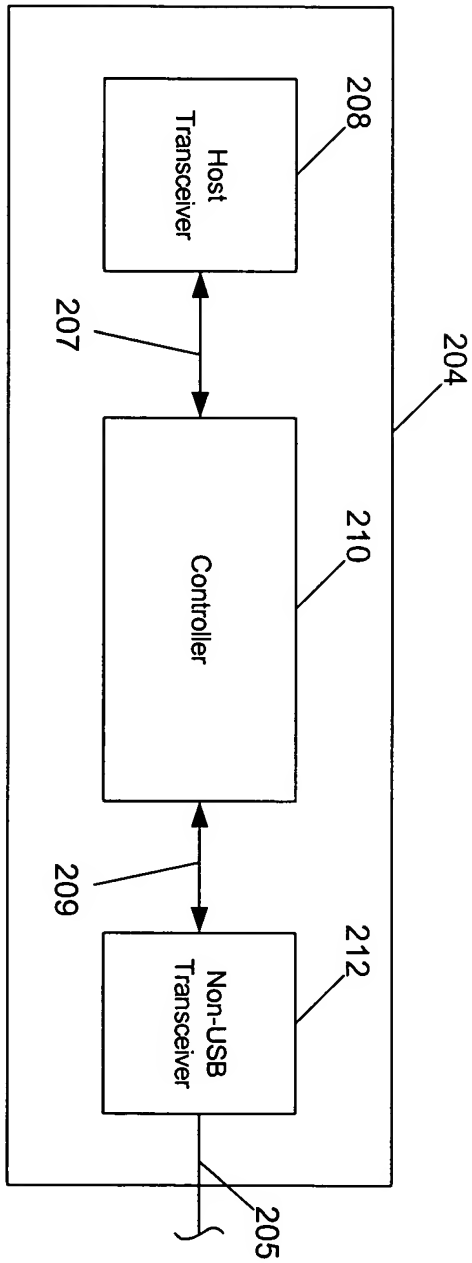

Figure 2B

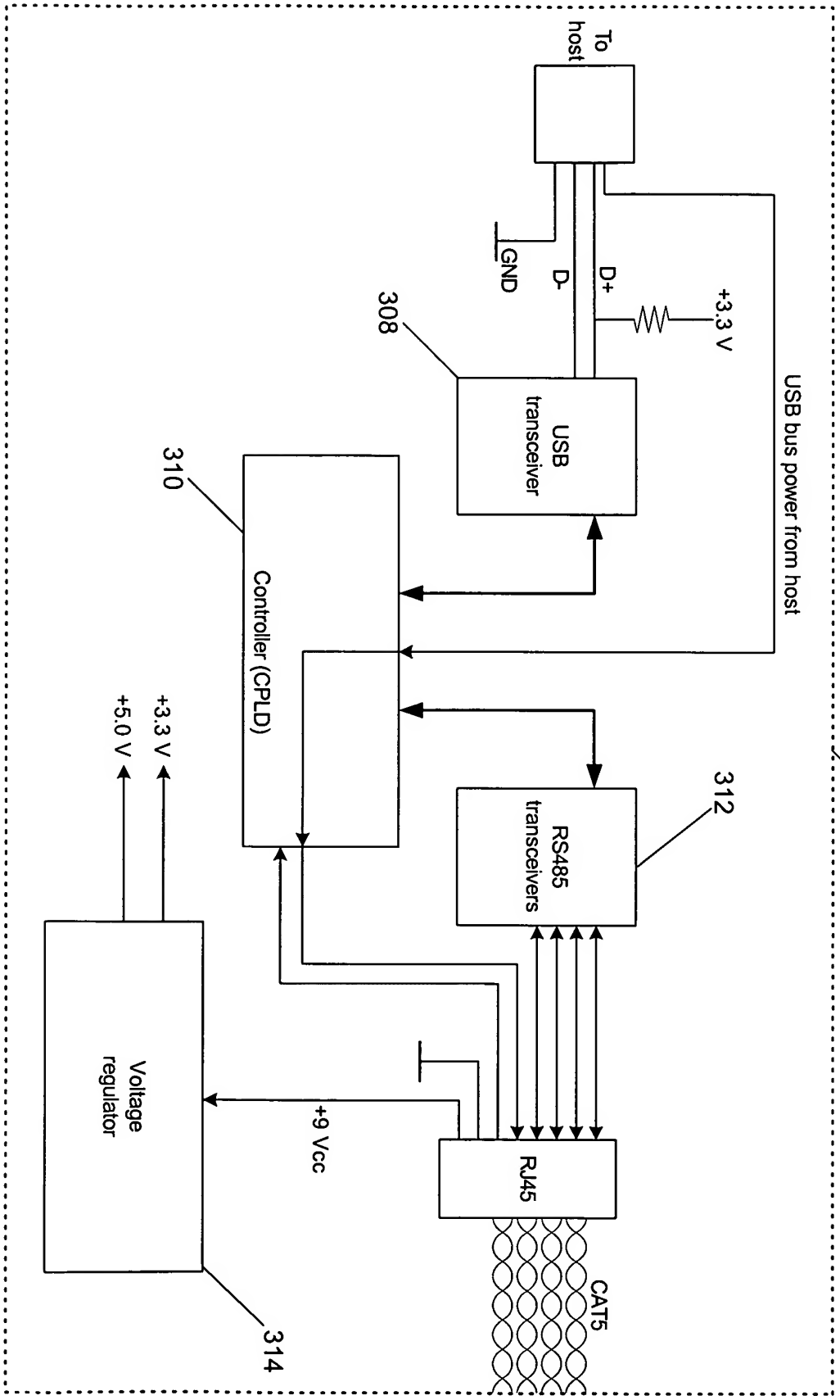
To host
GND
D-
D+
+3.3 V
308
USB transceiver
USB bus power from host
310
Controller (CPLD)
+5.0 V
+3.3 V
312
RS485 transceivers
204
Voltage regulator
+9 Vcc
RJ45
CAT5
314

Figure 3

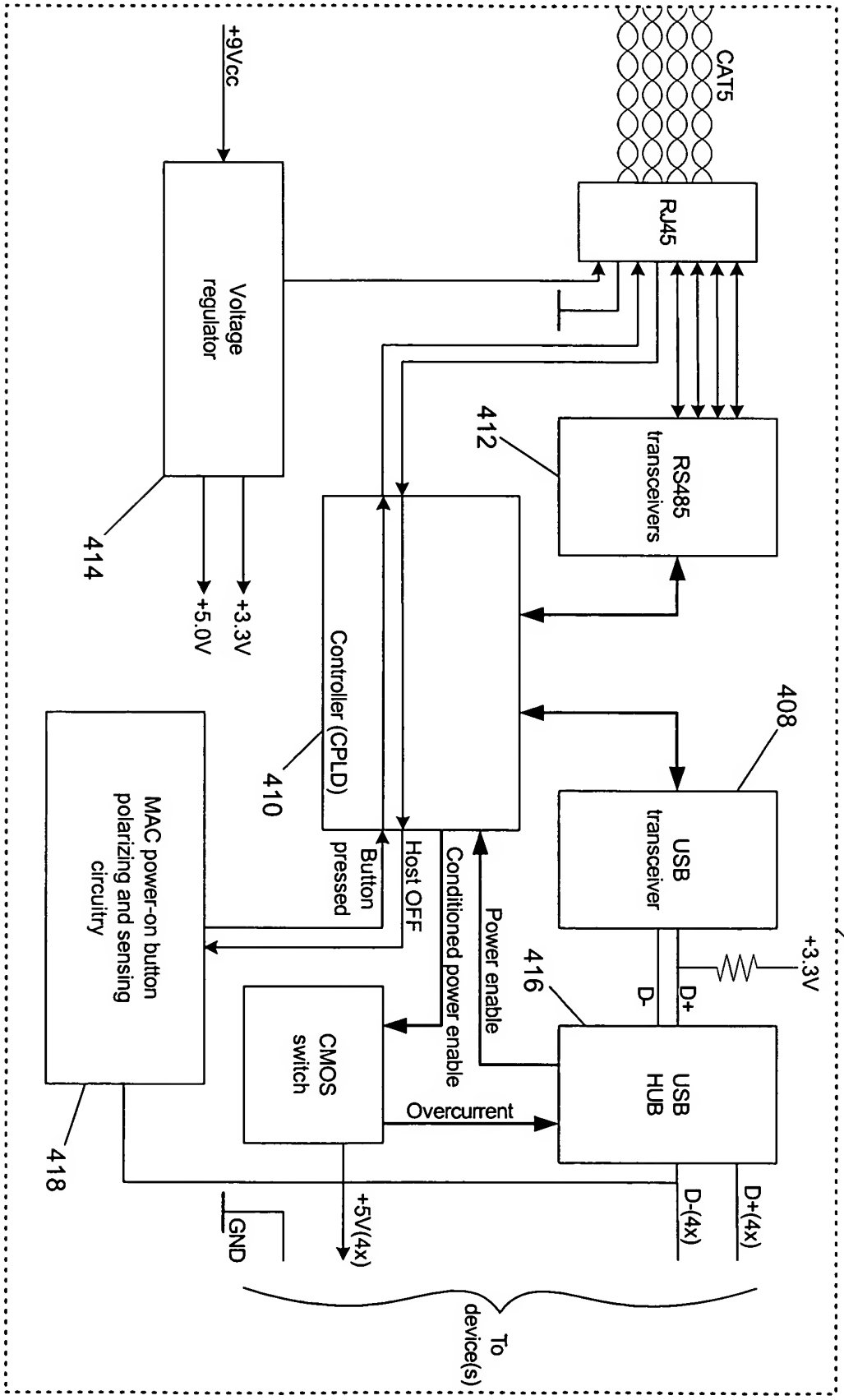
CAT5
RJ45
+9Vcc
Voltage regulator
412
RS485 transceivers
414
+5.0V
+3.3V
Controller (CPLD)
410
408
USB transceiver
MAC power-on button polarizing and sensing circuitry
Button pressed
Host OFF
Conditioned power enable
Power enable
+3.3V
416
D-
D+
CMOS switch
USB HUB
Overcurrent
206
418
GND
+5V(4x)
D-(4x)
D+(4x)
To device(s)

Figure 4

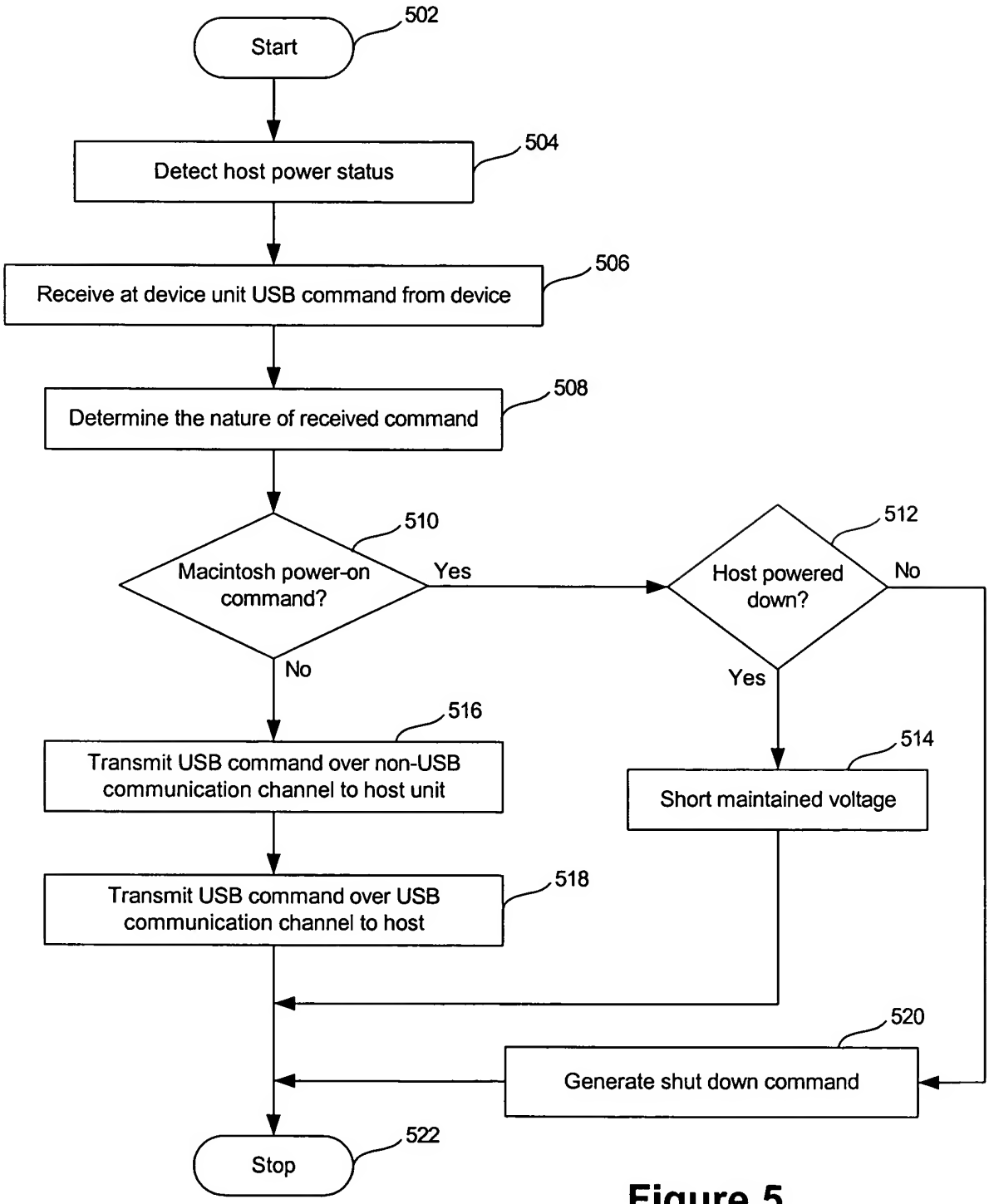
Start
502
Detect host power status
504
Receive at device unit USB command from device
506
Determine the nature of received command
508
Macintosh power-on command?
510
Yes
No
Host powered down?
512
No
Yes
Transmit USB command over non-USB communication channel to host
516
Short maintained voltage
514
Transmit USB command over USB communication channel to host
518
Generate shut down command
520
Stop
522

Figure 5